

REMARKS

This is responsive to the Office Action mailed August 3, 2009 ("Office Action").

Claim Rejections – 35 U.S.C. §103

Claim 1 is rejected under 35 U.S.C. §103(a) as being unpatentable over Hampden-Smith et al. (US 2005/0112056) in view of Edlund et al. (US 2002/0114984).

Claim 1 and the claims which depend from claim 1 disclose a fuel supply apparatus for providing a continuous supply of a hydrogen-rich reformat comprising the following: (1) a reforming reactor comprising a catalyst bed for converting a hydrocarbon fuel to a reformat, the catalyst bed comprising a reforming catalyst and a carbon dioxide fixing material; (2) a hydrogen storage device in fluid communication with the reforming reactor for storing a portion of the reformat; (3) a reformat outlet in fluid communication with the hydrogen storage device; and (4) a controller in communication with the reforming reactor and the hydrogen storage device for controlling the delivery of reformat to the reformat outlet.

According to the Examiner, it would have been obvious to one of ordinary skill in the art to add a controller, as in Edlund, to the communication means from the reforming reactor to the hydrogen storage device of Hampden-Smith as a preferable way of regulating the flow of reformat to the hydrogen storage device and the fuel cell (Office Action, pp. 3-4). Applicant presents the following argument in addition to the arguments previously presented: Hampden-Smith is directed to "Materials that are useful for absorption enhanced reforming (AER) of a fuel, including absorbent materials and catalyst materials" (Abstract). Hampden-Smith discusses controlling the composition and the microstructure of the powders (for example, see paragraphs 0025, 0026, 0122, and 0123). Hampden-Smith does not teach or suggest a controller in communication with the reforming reactor and the hydrogen storage device for controlling the delivery of reformat to the reformat outlet. Hampden-

Smith does not discuss any communication between the reforming reactor and the hydrogen storage device. As a result, one of ordinary skill in the art would not have been motivated to add the controller of Edlund to Hampden-Smith. Reconsideration and withdrawal of the rejection of claim 1 under §103(a) is respectfully requested.

Claims 1-3, 5-7, and 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sircar et al. (US 6,103,143) in view of Edlund et al. (US 2002/0114984).

Claim 1 and the claims which depend from claim 1 disclose a fuel supply apparatus for providing a continuous supply of a hydrogen-rich reformat comprising the following: (1) a reforming reactor comprising a catalyst bed for converting a hydrocarbon fuel to a reformat, the catalyst bed comprising a reforming catalyst and a carbon dioxide fixing material; (2) a hydrogen storage device in fluid communication with the reforming reactor for storing a portion of the reformat; (3) a reformat outlet in fluid communication with the hydrogen storage device; and (4) a controller in communication with the reforming reactor and the hydrogen storage device for controlling the delivery of reformat to the reformat outlet.

According to the Examiner, Sircar fails to disclose a controller that controls the operation of the hydrogen storage device and the flow rate of the reformat to the hydrogen storage device. Applicant presents the following argument in addition to the arguments previously presented: Sircar does not teach or suggest a controller in communication with the reforming reactor and the hydrogen storage device for controlling the delivery of reformat to the reformat outlet. Sircar discusses reaction temperature control (Col. 3, lines 34-35) but does not discuss any communication between the reforming reactor and the hydrogen storage device. As a result, one of ordinary skill in the art would not have been motivated to add the controller of Edlund to Sircar. Reconsideration and withdrawal of the rejection of claims 1-3, 5-7, and 11-17 under §103(a) is respectfully requested.

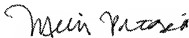
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Conclusion

All of the stated grounds of objection and rejection are believed to have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicant believes that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully submitted,



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